

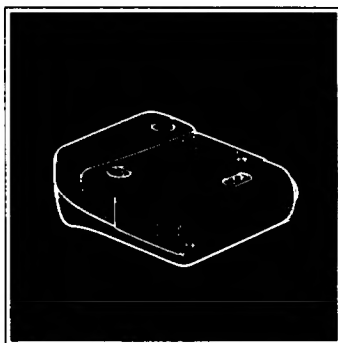
**Still Video Camera**

# **MVC-A10**

## **Operating Instructions**

Before operating the unit, please read this manual thoroughly and retain it for future reference.

To record and play back with this unit,  
the MAP-T2 playback controller is necessary.  
The MAP-T1 playback adaptor cannot be used with this unit.



Hi-Band  
**Mavica**  
**Hi V** )))

## IMPORTANT SAFETY INSTRUCTIONS

When using your electronic flash, basic safety precautions should always be followed, including the following:

1. Read and understand all instructions before using.
2. Close supervision is necessary when any appliance is used by or near children. Do not leave appliance unattended while in use.
3. Care must be taken as burns can occur from touching hot parts.
4. Do not operate appliance if it has been dropped, damaged, or disassembled, or if it has been examined by a qualified serviceman.
5. Position the cord so that it will not be tripped over, pulled, or contact hot parts.
6. Always unplug appliance from electrical outlet when not in use. Never yank cord to pull plug from outlet. Grasp plug and pull to disconnect.
7. Loop cord loosely around appliance when storing.
8. To reduce the risk of electric shock, do not immerse this appliance in water or other liquids.
9. To reduce the risk of electric shock, do not disassemble this appliance, but take it to a qualified serviceman when service or repair work is required.
10. Incorrect reassembly can cause electric shock when the appliance is used.
11. The use of an accessory attachment not recommended by the manufacturer may cause a risk of fire, electric shock, or injury to persons.

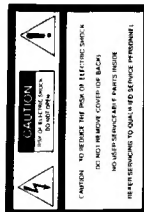
### Owner's Record

The model and serial numbers are located on the bottom of the unit.  
Record the serial number in the space provided below.  
Refer to these numbers whenever you call upon your Sony dealer regarding this product.

Model No. MVC-A10 Serial No. \_\_\_\_\_

## WARNING

To prevent fire or shock hazard, do not expose the unit to rain or moisture.  
To avoid electrical shock, do not open the cabinet. Refer servicing to qualified personnel only.



This symbol is intended to alert the user of the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

This symbol is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

### INFORMATION

This equipment generates and uses radio frequency energy and if not installed and used properly, it is, in strict accordance with the instructions in this manual, capable of causing interference to radio and television reception. It has been type tested and found to comply with the limits for a Class B Subpart 15 of Part 15 of FCC Rules, which are designed to provide reasonable protection against such interference when the equipment is operated in a typical residential environment. However, no guarantee that interference will not occur in a particular installation. If this equipment does cause interference to radio or television reception, which can be determined by turning the equipment off and on, the user is advised to try to correct the interference by one or more of the following measures:

- Reorient the receiving antenna.
- Relocate the equipment with respect to the receiver.
- Move the equipment away from the receiver.
- If the interference persists, contact the dealer for further assistance. The equipment and receiver are on different branch circuits.
- If necessary, the user should consult the dealer or an authorized service center for suggestions.
- The user may find the following booklet prepared by the Federal Communications Commission helpful: "How to Identify and Resolve Radio-TV Interference Problems". This booklet is available from the U.S. Government Printing Office, Washington, DC 20540. Stock No. 004-000-004-6-4.

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## Outline

The MVC-A10 "Maxica" is a still video camera that records pictures and sounds magnificently without the use of film.

### Automatic adjustments

It is compact and light in weight. It is easy to operate because focus and exposure adjustments are not necessary.

### Audio recording

Sound can be recorded through the built-in microphone or an external microphone. Audio recording is automatically done for approximately 10 seconds following a video recording. This is convenient for recording a comment on the video recording, etc.

### Display window

The number of the recorded tracks and the various indicators appear on the display.

## Precautions

- The Maxica MVC-A10 is a still video camera based on the **HEX** **af** format. To play back the Maxipak recorded with the MVC-A10, a playback computer, MAP-72, or a still video player with the **HEX** **af** mark is necessary. When an unit without the **HEX** **af** mark is used, proper playback cannot be achieved.
- Avoid using in a strong electric field. Pictures may be distorted or otherwise spoiled when used near the antenna of a TV or radio station.
- Do not touch the top edge of the lens with a dry, soft cloth. Wipe it with a damp cloth.
- When it is extremely dry, use a mild soap on the cloth before wiping.

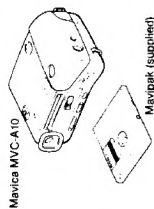
## Check your unit first

There are the following differences, depending upon the country where MVC-A10 is purchased:  
**Canada:** The MAP-72 playback computer and an external microphone are packed with the unit.  
**USA and other countries:** Neither playback computer nor external microphone is packed with the unit.

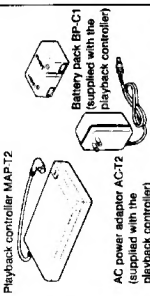
# Quick Reference

## The following items are necessary for recording.

To use this unit, the MAP-T2 playback controller is necessary. The MAP-T1 playback adaptor cannot be used with this unit.



Navica MVC-A10



Battery pack BP-C1

(supplied with the playback controller)

AC power adaptor AC-T2

(supplied with the playback controller)

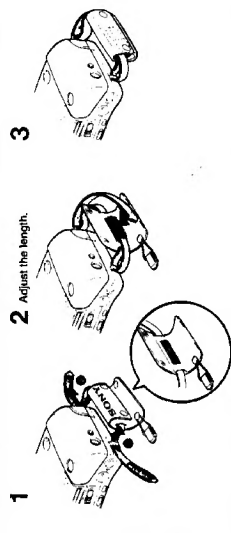
Be sure to charge the battery pack before using the unit.

## Recording

For details, refer to page 6.

<p><b>1</b> Insert the fully-charged battery pack.</p>	<p><b>2</b> Insert the Navipak.</p>	<p><b>3</b> Set the shooting mode selector to S.</p>	<p><b>4</b> Set the AUDIO recording mode selector to AUTO.</p>	<p><b>5</b> Look into the viewfinder and frame the subject.</p>	<p><b>6</b> Press the shutter button halfway. When the green LED glows in the viewfinder, press the button all the way down to take a picture. After shooting, sound can be recorded automatically for 10 seconds.</p>
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## How to attach the supplied grip belt



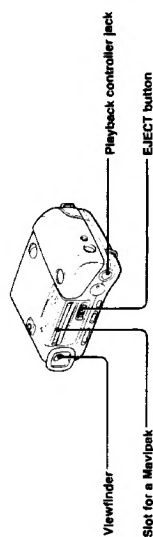
1

2 Adjust the length.

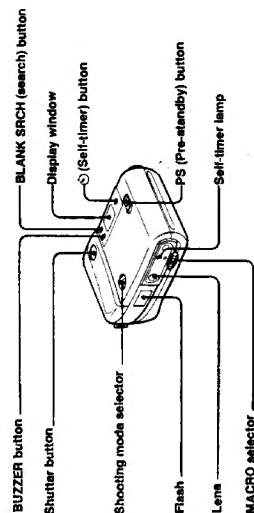
3

# Location and Function of Parts

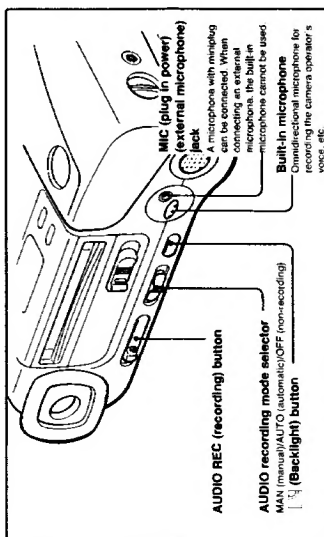
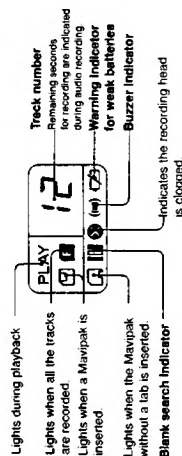
## Front view



## Top view/Rear view

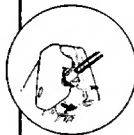
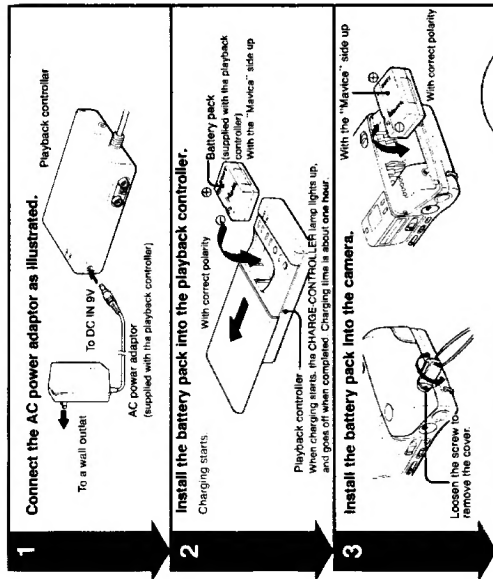


## Display window

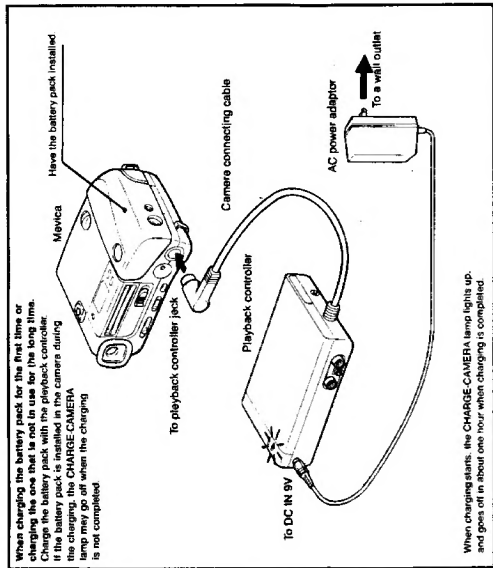


# Power Source

Before operating the unit, be sure to charge the battery pack fully with the playback controller.



To charge the battery pack in the camera



**When the battery pack is installed in both the camera and the playback controller**

Continuous charging can be carried out — from camera to playback controller.

## CAUTION

When the camera is not in use for a long time, remove the battery pack. If the battery is installed, even if the shooting mode selector is set to LOCK, a negligible amount of electric current flows.

Number of tracks that can be recorded with one fully charged battery

Video recording only  
About 125 pairs of picture and sound can be recorded when the battery is charged for one hour (according to the specifications by Sony).

Audio/Video recordings

About 125 pairs of picture and sound can be recorded when the battery is charged for one hour (according to the specifications by Sony).

When the battery gets weak,  $\swarrow$  appears on the display window.

(batt) The battery pack is starting to lose power. Replace or charge the battery pack as soon as possible.

(bat) The battery pack has consumed all of its power. No recording can be done. Replace or charge the battery pack.

Precautions on the battery pack

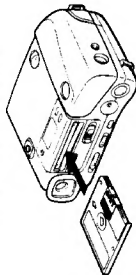
- When charging the battery pack, always use the MAP-72 playback controller.
- Do not short the terminals of the playback controller or the battery pack by accident, pins, etc.
- Do not use the gel battery pack, or the battery may be impaired.

Life of the battery pack

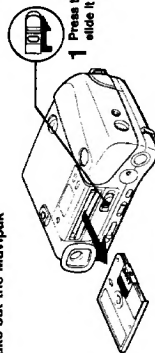
Replace the battery pack with a new one (BP-C1, optional) if you can only take about half the number of pictures under average temperatures, even when it is fully charged.

## Inserting the Mavipak

Insert until it stops — in the direction of the arrow.



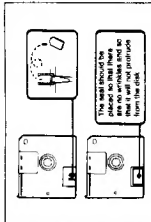
To take out the Mavipak



2 The Mavipak comes out.

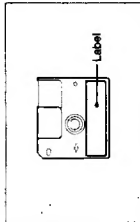
### To prevent accidental erasure

- Take off the tab on the back of the Mavipak.
- When the hole from which the tab was taken is covered by a seal supplied with the Mavipak, it can be recorded again.



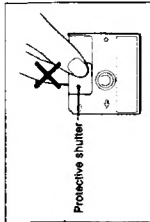
### To make a memorandum of recorded contents

- Place the label at the position indicated on the picture at right. When the label is not placed at the position shown, it can cause malfunction and damage.




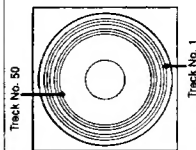
### Precautions

- Never open the protective shutter.
- Do not place the Mavipak where there is magnetism (on top of a speaker box, etc.). This can cause the Mavipak to be erased or to be permanently damaged.
- Do not leave the Mavipak in the camera for a long period of time when not in use.
- Do not leave the Mavipak where there is direct sunlight, near heaters, or in a dusty place.
- When changing the Mavipak, avoid doing it in rain or snow, or in dusty places. When water or dust gets inside in the camera, it causes damage.



### Mavipak

The Mavipak is a 2-inch video floppydisk. It conforms to the unified standard designated by the Still Video Camera Committee. It is equivalent to the film in a traditional camera. A magnetic disk in the Mavipak to record pictures and sound is called a track. A total of 50 pictures and sounds can be recorded magnetically on tracks numbered from 1 to 50. Therefore, a recorded track can be erased, or recorded again. Use a Mavipak or a floppydisk with a  mark.



## How are pictures and sounds recorded on the Mavipak?

### Video recording

A video recording requires one track for each picture. When recording pictures only, a Mavipak can hold 50 pictures.

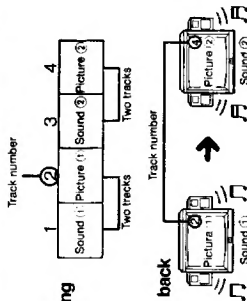
### Audio recording

A pair of picture and sound can be recorded. (Sound by itself cannot be recorded.) As an audio recording requires one track, a recording of the pair of picture and sound requires two tracks. (The picture number on the display advances one track for each picture. The sound track does not respond exactly to its paired picture but the audio recording starts after the shutter button is pressed.

### When playing back the Mavipak on which sound is recorded

Ex: In the case of a Mavipak on which sound is recorded with the AUDIO recording mode selector set to AUTO.

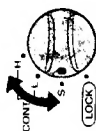
#### When recording



#### When playing back

Even if only pictures are recorded, sound can be recorded afterward as narration for the recorded pictures. For details, refer to the operating instructions for the MAP-T2 (page 6).

## 1 Select the shooting mode.



### To shoot a single picture

S: A single picture is shot each time the shutter button is pressed.

### To shoot continuous pictures

CONT L (continuous low): An object while the shutter button is pressed. Useful in active sports.

### CONT H (continuous high):

10 pictures per second are shot while the shutter button is pressed. Useful in photographing in tennis, golf, etc. by stopping the picture.

When using flash in the CONT L and H modes, continuous shooting of one picture per approximately 1/10 second can be done (when using a fully-charged battery pack).

## 2 Select the AUDIO recording mode.

When the selector is set to AUTO



### AUTO (automatic recording):

Sound is automatically recorded for about 10 seconds immediately after shooting.

When the selector is set to MAN



### MAN (manual recording):

Sound can be recorded for about 10 seconds when shooting (the 10 to 60 sec. within 2 minutes after shooting).

### When not recording sound

Set the selector to OFF.

### Sound playback for continuous shooting mode

The sound is played back, corresponding to the first picture.

### CAUTION

Do not slide the AUDIO recording mode selector during shooting. Otherwise, recording cannot be completed.

3	4	5
<b>Look into the viewfinder to frame the subject.</b> Stand more than 1.5 m (5 ft.) from the subject to be shot. <div data-bbox="194 1266 428 1485"> </div> <div data-bbox="441 1300 551 1458"> <p>How to hold the camera</p> </div>	<b>Shoot.</b> 1 Lightly press the shutter button. (Or the PS button*) <div data-bbox="202 1065 263 1132"> <p>Shutter button</p> </div> <div data-bbox="275 1014 386 1149"> <p>PS button</p> </div> 2 When the green lamp is lit in the viewfinder <div data-bbox="325 1065 386 1149"> </div> 3 Press the shutter button all the way down. <div data-bbox="423 1065 485 1149"> </div> <div data-bbox="485 1031 559 1233"> <p><b>A buzzer sounds when shooting.</b>            The flash activates in a dark place.            For continuous shooting, press the shutter button all the way down and keep it pressed continuously while the shutter button is pressed.</p> </div>	<b>Record sound.</b> (When the AUDIO recording mode selector is set to AUTO) <div data-bbox="226 796 263 863"> <p>MAN AUTO OFF</p> </div> <p>When the buzzer sounds after pressing the shutter button, "A", "10", "9", "8", "7", "6", "5", "4", "3", "2", or "1" appears on the display window. When countdown sound can be recorded until the buzzer sounds again.</p> (When the AUDIO recording mode selector is set to MAN) <div data-bbox="399 796 436 863"> <p>MAN AUTO OFF</p> </div> <p>Slide the AUDIO REC button to the left while keeping the red button pressed. Then, speak into the microphone. (Once the lever is slid to the left, you can let your hand go.)            "A", "10", "9", "8", "7", "6", "5", "4", "3", "2", or "1" appears on the display window.            When countdown sound can be recorded until the buzzer sounds again.            Record the sound for the picture you shot last within 5 minutes after shooting.</p> <div data-bbox="485 796 547 880"> <p>AUDIO REC</p> </div>

**When a red lamp blinks in the viewfinder, and the buzzer sounds**  
 No recording can be made. Look at the display window to find the cause.

Indicator	Cause and remedy
	The Manapak is not inserted. Insert the Manapak.
	The tape on the Manapak has been removed. Replace with a new Manapak or put the supplied seal on the Manapak.
	All tracks on the Manapak have been recorded. Replace with a new Manapak or erase the tracks. (Refer to the instructions for the Manapak.)
	The last track (No. 50) has been recorded but erased tracks remain. Erase the recorded tracks by recording on the erased tracks.
	The battery pack is weak. Replace with a new one or charge the battery.
	The recording head is clogged in the tape. Clean the head with the VHS-250. (The VHS-250 is available in the U.S.A. only) or contact the nearest Sony dealer.
	The picture or the sound just recorded may not remain on the track.

**When no recording is made for 5 minutes**  
 To prevent battery consumption, the indicator on the display window goes off, and the power will go off automatically. To start recording again, press the shutter button lightly.

**Buzzer**  
 The buzzer sounds in the following cases:  
 • When shooting (beeps once)  
 • When audio recording starts and ends (sounds once each)  
 • When it is impossible to record a picture or a sound (beeps continuously)  
 • Self-timer shooting (sounds for 10 seconds)

**Flash**  
 The flash light reaches up to about 4 m (13 ft.). Shoot so that the subject is within 1.5 m (5 ft.) to 4 m (13 ft.).

**When not using the camera**  
 Set the shooting mode selector to the LOCK position. The power turns off and the shutter button is locked.

**To interrupt an audio recording**  
 Press the PS button. The sound recorded before pressing the button remains on the track(s).

**Display window in recording sound**  
 Track number on the display window advances by 2 because a recording of the pair of picture and sound require 2 tracks.

**To erase the sound just recorded**  
 1 Press the AUDIO recording mode selector to MAN.  
 2 Slide the AUDIO REC button to the left again while "A", "10", "9", "8", "7", "6", "5", "4", "3", "2", or "1" appears on the display window. The sound just recorded is erased. (The sound cannot be erased when more than 5 minutes have passed after it was recorded.)

**To record a new sound over the sound just recorded**  
 1 Press the AUDIO recording mode selector to MAN.  
 2 Slide the AUDIO REC button to the left and record a new sound within 5 minutes after the first sound was recorded. The previous sound recorded is erased and the new sound is recorded. (The previous sound cannot be recorded when more than 5 minutes have passed after it was recorded.)



## Recording

### Macro (Close-up) Shooting

You can shoot as close as about 50 cm (20 in.) from the subject.

In the close-up shooting, keep about 50 cm (20 in.) away from the subject.\*

In the normal shooting, keep more than 1.5 m (5 ft.) away from the subject.

\*When the MACRO (close-up) selector is set to MACRO, shoot from the subject about 50 cm (20 in.) away. If the normal shooting is done with the MACRO selector set to MACRO, the subject becomes blurred.

### 1 Set the MACRO (close-up) selector to MACRO while keeping the center button pressed.

The green lamp blinks in the viewfinder.

Green lamp

MACRO

A green lamp appears below the lens.

MACRO (Close-up) selector

### 2 Lightly press the shutter button.

The green lamp is lit in the viewfinder.

### 3 Press the shutter button all the way down.

Caution

The edge of picture may be clipped when playing back, depending upon the TV set. To avoid this, leave some space around the subject in the close-up shooting.

**CAUTION**

The edge of picture may be clipped when playing back, depending upon the TV set. To avoid this, leave some space around the subject in the close-up shooting.

The built-in microphone is an omnidirectional microphone. To pick up specific sounds (e.g. the voice of the person to be shot), use an external microphone equipped with a minijack. An external microphone (plug-in power type) can be connected to the MIC jack, and it is powered by the camera's battery. Do not connect an external microphone to the MIC jack when the external microphone is connected.

Use the self-timer when taking a group picture, etc.

### Shooting with Self-timer

#### 1 Place the camera horizontally or attach a tripod.

When not attaching a tripod, place the camera on a flat surface so that the slot for a Minivack is horizontal to the ground.

#### 2 While keeping the self-timer button pressed, press the shutter button.\*

Be sure that the self-timer lamp blinks. The camera takes a picture about 10 seconds after the shutter button is pressed. A buzzer will continue to sound until the picture is taken. (The blinking becomes rapid for the last 2 seconds.)

The track number blinks

Press the backlight button each time you press the shutter button.

### Shooting in Backlit Situations

When shooting in the backlight, the subject becomes dark because the background is too bright. In this case, press the backlight button before shooting. The exposure for the subject is compensated to the proper degree.

### How to attach a tripod

Attach a tripod as shown in the diagram. When attaching a light connector, make sure that the connector does not collapse because of the weight of the Minivack. For details, refer to the operating instructions of the tripod.

Use the tripod with a platform that can be made vertical to the ground.

**To release the self-timer**

Set the shooting mode selector to the COCK position.

**To record sound in the self-timer shooting**

Set the AUDIO recording mode selector to MAN. You can record sound any time when 5 minutes after the self-timer shooting.

\*Lightly press the shutter button, and after the green lamp is lit in the viewfinder, press the button all the way down.

**To use the backlight button in shooting continuous pictures**

The backlight button is compensated for all the tracks while the shutter button is continuously pressed for continuous shooting. Once the shutter button is halfway released or completely released, the backlight adjustment does not operate. To continue shooting, press the backlight button again before pressing the shutter button.

# To Record onto a Recorded Track

Since the Navpak records pictures and sounds magnetically, it can erase unnecessary track(s) and can record again.

## Erase unnecessary track(s)

The MAP-12 playback controller is needed for erasing. For details, refer to the operating instructions of the playback controller.

## To record onto erased track(s)

### A Navpak on which all the tracks are erased from the Navpak.

You can record from track No. 1, the same as a new Navpak.

### A Navpak on which track(s) in-between are erased

- 1 Take the Navpak out of the camera.
- 2 Press the BLANK SRCH button. **ER** will appear on the display window.
- 3 Insert the Navpak and shoot.

The camera searches for erased (unrecorded) tracks, and start recording from the track with the smallest number.

#### Precaution

The blank search mode cannot be set while the Navpak is in the camera.

#### To release the blank search mode

Press the BLANK SRCH button again. **ER** will disappear from the display window. The blank search mode will also be released when the Navpak is taken out, or when the battery pack is exchanged.

#### A track is blank in the following cases.

- When this recorded picture or sound is erased with a playback controller.
- When no sound is recorded within 5 minutes after the picture is shot with the AUDIO recording mode selector set to MAN.
- When the AUDIO recording mode selector is set to MAN and the camera is powered off.
- When the AUDIO REC button is held to the left while recording pictures and sounds with the AUDIO recording mode selector to MAN.

## When the blank search function is used or not

Ex: In the case of a Navpak on which recordings from No. 1 to No. 5 were made, and tracks No. 2 and No. 4 were erased.

### Without using the blank search function

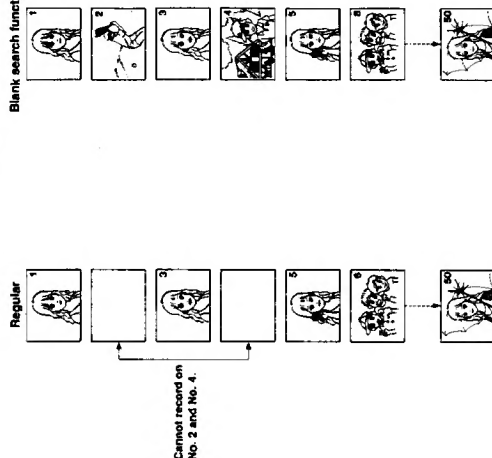
A total of 45 tracks can be recorded from No. 6 to No. 50.

### Using the blank search function

A total of 47 tracks can be recorded. For No. 2, No. 4 and No. 6, continuous shooting for 2 to 4 to 6 to 50 can be done.

**Audio recording when using the blank search function**  
A pair of picture and sound, or only a picture can be recorded. A pair of picture and sound can be recorded as long as there is a 2 second (blank) pause when they are not subject to blank erase (No. 2 and No. 4).

#### Blank search function



# Specifications

<b>Type:</b>	Still video camera with high band format
<b>Recording:</b>	<ul style="list-style-type: none"> <li>Unlimited standard based on Still Video Camera Committee</li> <li>25 pictures with sound (field recording)</li> </ul>
<b>Recording capacity:</b>	9.6 seconds max /25 recordings
<b>Audio recording mode:</b>	<ul style="list-style-type: none"> <li>Automatic recording</li> <li>Manual recording</li> </ul>
<b>Lens:</b>	<ul style="list-style-type: none"> <li>15mm f/2.6</li> <li>Tuned focus</li> <li>(1.5m/5 ft. - infinity, 50 cm/1.6 ft. at infinity)</li> <li>2/3 inch MOS image sensor (280,000 pixels), sensitivity equivalent to ISO 80 film</li> </ul>
<b>Image sensor:</b>	
<b>Exposure control:</b>	<ul style="list-style-type: none"> <li>Programmed autoexposure</li> <li>Electronic shutter built in the image sensor</li> <li>Flash time automatically below EV 9</li> </ul>
<b>Shutter:</b>	<ul style="list-style-type: none"> <li>Electronic shutter built in the image sensor</li> </ul>
<b>Metering system:</b>	<ul style="list-style-type: none"> <li>Automatic activation</li> <li>guide number 11</li> </ul>
<b>Flash:</b>	<ul style="list-style-type: none"> <li>Single picture shooting</li> <li>Continuous shooting at 4 pictures per sec</li> </ul>
<b>Shooting mode:</b>	<ul style="list-style-type: none"> <li>CONT H - Continuous shooting at 10 pictures per sec</li> <li>Electronic type, 10 second delay</li> </ul>
<b>Self timer:</b>	<ul style="list-style-type: none"> <li>4.1 sec</li> </ul>
<b>Operating temperature:</b>	41°F - 104°F (5°C - 40°C)
<b>Power requirements:</b>	<ul style="list-style-type: none"> <li>6V DC with BP C1 battery pack</li> <li>Approx. 4.5 hr. (approx. 100 pictures)</li> <li>(5 1/4 x 2 1/4 x 3 1/4 in) (4 1/8 in)</li> <li>Approx. 620g (1 lb 6 oz) including battery pack</li> </ul>
<b>Dimensions:</b>	
<b>Weight:</b>	<ul style="list-style-type: none"> <li>Built in electret condenser microphone</li> <li>Impedance 6 ohms</li> </ul>
<b>Microphone:</b>	
<b>MIC input jack:</b>	<ul style="list-style-type: none"> <li>Minimax - 60 dB, low impedance</li> <li>With 2.5 - 3V DC output</li> </ul>
<b>Supplied accessories:</b>	<ul style="list-style-type: none"> <li>Battery pack (1)</li> <li>Soft case (1)</li> <li>Grip belt (1)</li> </ul>
<b>Optional accessories:</b>	<ul style="list-style-type: none"> <li>Still video system case LCH-10</li> <li>Battery pack BP C1</li> <li>Cleaning disk VFD-25CL (available in the U.S.A. only)</li> <li>Electret condenser microphone ECM-144</li> </ul>

Design and specifications subject to change without notice

# Troubleshooting

Before going through the check list below, first refer back to the connections and operating procedures. Should any problem persist after you have made these checks, consult your nearest Sony service facility. The number in black is the page number to refer to.

## Shooting

Symptom	Cause	Remedy
Will not shoot when shutter button is pressed.	No indicator in the viewfinder. The battery is consumed. The shooting mode selector is set to the LOCK position. A red lamp lights up in the viewfinder and the buzzer sounds.	Insert a fully-charged battery pack. See page 10. Set to S, CONT, L or H. See page 10. Refer to "When the red lamp blinks in the viewfinder and the buzzer sounds" on page 10.
The Macro is selected when inserted into the camera.	The Macro is not inserted correctly.	Insert the Macro again. If it is inserted correctly, the Macro will be selected.
Takes time for the green lamp to light up in the viewfinder.	The battery pack has been consumed.	Put in a fully-charged battery pack. See page 10.

## Playing back picture

Symptom	Cause	Remedy
The picture is blurred.	The subject is too close. Hands are shaking. The MACRO selector is set to MACRO.	Be more than 1.5m (5 ft.) away from the subject. Hold the camera still when shooting. Set the selector to the left when not shooting in macro.
The picture is reddish or greenish.	When the picture is not taken with flash, it becomes reddish under an incandescent light, and greenish under a fluorescent light.	
Many reddish circles appear on the playback picture.	Flare occurs on the lens caused by strong light like the sun.	Shoot the picture so that strong light will not go into the lens. E.g. The reflection of water caused by the sunlight.
Tricky black lines appear when shooting a subject with a strong light source. Or the picture has a dark border.	This occurs because of the characteristic of the image sensor.	
The picture is dark even when the flash is used.	The subject is too far.	Shoot the picture so that the distance is within 1.5m (5 ft.) to 4m (12 ft.).
The eyes of the person are reproduced reddish when the flash is used.	This occurs when the flash light goes into a person's eyes and light the blood vessels of the retina.	This can be assumed by having the person get used to the light, or by having the person look somewhere other than directly into the camera lens.
The picture is whitish.	The backlight button was pressed in shooting, while the light came from the front of the subject.	Shoot without pressing the backlight button.

## Playing back sound

Symptom	Cause	Remedy
No sound is heard.	AUDIO recording mode selector was set to OFF in recording. AUDIO REC button was slid to the left several times while recording with the AUDIO recording mode selector set in MAN.	Set the AUDIO recording mode selector to AUTO or MAN when recording. Re-record sound by using the MAP-TZ.
Sound is weak.	AUDIO recording mode selector was set to OFF in playing back. Sound was too far away from the microphone in recording.	Try back the sound with the AUDIO recording mode selector set to AUTO or MAN. Speak into the microphone or use an external microphone.

## Display window, etc.

Symptom	Cause	Remedy
The indicators on the display window disappear, and the power turns off.	No recording was done for more than 5 min. The same track was played back for more than 5 min.	Lightly press the shutter button. See page 10. Press the shutter button or the PLAY button of the playback controller.
The camera does not operate.	Internal circuit is troubled by static electricity etc.	Take the battery pack out, and re-install it to reset the camera.
Consumption of the battery pack is rapid.	Incomplete battery charge. The battery pack becomes weak.	Install a fully-charged battery pack. Replace with a new battery pack.
	It is used in a place with an extremely low temperature.	The power of the battery pack is lowered in places with an extremely low temperature. Use it after warming the camera, for example, putting it into your pocket.